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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 April 2009*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18 and 20-32* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18 and 20-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

2.   On pages 10-12 applicant argues (A.) that McIlvain et al fails to disclose, suggest or teach the following limitations "using a processor to assign physically discontinuous free blocks in a disk recording area to sequential logical blocks in a circular buffer, based on the control information when a time-delayed viewing mode is selected" as recited in Claim 1.It is noted in McIlvain Column 3 Lines 40-67 disclose the use of a processor to assign physically discontinuous free blocks. Specifically, McIlvain discloses in Column 3 Lines 51-55 the following: "A next logical position does not necessarily mean the next successive logical position or any other logical position. It is whatever logical position is to be accessed next, as determined by the type of command and other control".   Thereby, the free block can be discontinuous as there is not a particular block that has be processed next and thereby the examiner reads this to allow for the controller to process the blocks in a discontinuous manner since it is not required for the next block to be processed. Furthermore, applicant argues that McIlvain fails to disclose how each logical address of the circular buffer is assigned. It is noted in Column 5 Lines 53+ through Column 6 Lines 1-49 describes the processor specifically indicating the address of the logical or physical position of the storage device and thereby discloses how each address of the buffer is assigned. However, examiner notes that McIlvain does not specifically disclose the assigning of the logical or physical

position of the storage device and how it corresponds to the recording area. This new

limitations is taught by Barton in Column 5 Lines 34-67 which describes the assigning of

free blocks in the circular buffer wherein the actual address of each block corresponds

the files being stored to the physical blocks on the recording disk.

3.   On pages 10-14 applicant argues (B.) that O'Connor et al fails to disclose

"physically discontinuous free blocks in a disk recording area" as recited in Claim 1.

The arguments in regard to O'Connor have been considered persuasive and the

reference has been withdrawn. The new reference of Barton teaches the limitations as

set forth in the newly amended claims. Also, the applicant's arguments as addressed on

pages 14-21 applicant argues have been considered but are moot in view of the new

ground(s) of rejection.

Remarks

4.   Claims 1-17 recite a method claim have been examined in regards to a 101

rejection. The specification discloses components (i.e. processor) that provide

communication beyond the capability of a human being to meaningfully receive using

only human capabilities. The "using a processor to assign physically discontinuous

free blocks.." step inherently requires the use of and relationship between a recording

medium and a processor. Thus this step is tied to a processor and thus to a particular

machine and is deemed statutory.

5.   Claims 1-18, 20-32 are currently pending. Claim 19 has been cancelled.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 1-6,8,9, 11, 15, 16, 17, 18, 20-21, and 32 are rejected under 35

U.S.C. 103(a) as being unpatentable by McIlvain et al (US 5,765,200) in view of Barton

et al (US 6,233,389).

[claim 1]

In regard to Claim 1, McIlvain et al discloses a video stream processing method in a

broadcast receiving system for time-delayed viewing, which includes disks having

control information required for recording an input signal and reproducing recorded

information recorded and a drive for driving the disks, the video stream processing

method comprising:

- having physically discontinuous free blocks in a disk recording area to

    sequential logical blocks in circular buffer based on the control information

    when a time delayed viewing mode is selected (Figure 2 shows the

    assigning of free blocks to the circular buffer. The assigning is based on

    control information as described in Column 5 Lines 20-52. Furthermore,

    Column 3 Lines 51-55 the following: "A next logical position does not

necessarily mean the next successive logical position or any other logical

position. It is whatever logical position is to be accessed next, as

determined by the type of command and other control". Thereby, the free

block can be discontinuous as there is not a particular block that has be

processed next and thereby the examiner reads this to allow for the

controller to process the blocks in a discontinuous manner since it is not

required for the next block to be processed); and

- recording video streams in the assigned circular buffer blocks (Column 5

  Lines 20-35 describes the recording of video streams); however, fails to

  disclose

  o   Using a processor to assign physically discontinuous free blocks in

      a disk recording area to sequential logical blocks in circular buffer

      based on the control information when a time delayed viewing

      mode is selected

Barton discloses a system for time delayed viewing of program information further

comprising:

  o   Using a processor to assign physically discontinuous free blocks in

      a disk recording area to sequential logical blocks in circular buffer

      based on the control information when a time delayed viewing

      mode is selected (Column 5 Lines 34-67 describes the assigning of

      free blocks in the circular buffer wherein the actual address of each

      segment and thereby corresponding the files being stored to the

physical blocks on the recording disk. Furthermore, it is noted in

Figures 5 and 6 the address is being assigned to the blocks of data

as the media switch 601 delays viewing).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of

the invention to use the video stream processing system, as disclosed by McIlvain et al

and further incorporate a system that assign physically discontinuous free blocks in a

disk recording area to sequential logical blocks in circular buffer based on the control

information when a time delayed viewing mode is selected, as disclosed by O'Connor et

al, in order to properly allow for the view to pause or rewind the video stream to allow for

more efficient viewing of the broadcast stream.

[claim 2]

In regard to Claim 2, McIlvain et al discloses a video stream processing method of claim

1, further comprising updating the control information and setting a pointer of a write

point to a last one of the assigned circular buffer blocks after the recording of the video

stream (Column 5 Lines 43-67 and Column 6 Lines 24-32 describes the setting the write

pointer to the last assigned circular buffer block).

[claim 3]

In regard to Claim 3, McIlvain et al discloses a video stream processing method of claim

1, wherein the sequentially assigning of the free blocks comprises assigning the free

blocks as the circular buffer blocks in a track and sector number ascending order

(Column 7 Lines 15+ and Column 8 Lines 19-35 describes the assigning of free blocks

in order of track and sector number).

[claim 4]

In regard to Claim 4, McIlvain et al discloses a video stream processing method of claim

1, wherein the control information comprises file attribute information, file assignment

information, free block information for each track, and circular buffer block information

(Column 9 Lines 5-47 describes the information that comprises the control information

in regard to information about the data).

[claim 5]

In regard to Claim 5, McIlvain et al discloses a video stream processing method of claim

1, further comprising: recovering the circular buffer blocks to the free blocks when the

broadcast receiving system is initialized (Column 2 Lines 33-43 describes the

recovering of free blocks once system task is initialized).

[claim 6]

In regard to Claim 6, McIlvain et al discloses a video stream processing method of claim

1, further comprising recovering the assigned circular buffer blocks to the free blocks

and updating the control information when a next circular buffer block is assigned

(Figure 2 shows the assigning of free blocks to the circular buffer. The assigning is

based on control information as described in Column 5 Lines 20-52.)

[claim 8]

In regard to Claim 8, McIlvain et al discloses a video stream processing method of claim

5, wherein the recovering of the circular blocks comprises updating information of one of

the circular buffer blocks which is pointed by a pointer at a write point with free block

information, the video stream processing method further comprising initializing the

pointer (Column 5 Lines 43-67 and Column 6 Lines 24-32 describes the setting the write

pointer to the last assigned circular buffer block).

[claim 9]

In regard to Claim 9, McIlvain et al discloses a video stream processing method in a

broadcast receiving system for time-delayed viewing, which includes disks having

control information required for recording an input signal and reproducing recorded

information recorded and a drive for driving the disks, the video stream processing

method comprising:

- having physically discontinuous free blocks in a disk recording area to
  sequential logical blocks in circular buffer based on the control information
  when a time delayed viewing mode is selected (Figure 2 shows the
  assigning of free blocks to the circular buffer. The assigning is based on
  control information as described in Column 5 Lines 20-52. Furthermore,
  Column 3 Lines 51-55 the following: "A next logical position does not
  necessarily mean the next successive logical position or any other logical
  position. It is whatever logical position is to be accessed next, as
  determined by the type of command and other control". Thereby, the free
  block can be discontinuous as there is not a particular block that has be
  processed next and thereby the examiner reads this to allow for the
  controller to process the blocks in a discontinuous manner since it is not
  required for the next block to be processed); and

- recording video streams in the assigned circular buffer blocks (Column 5 Lines 20-35 describes the recording of video streams); however, fails to disclose

  - o Using a processor to assign physically discontinuous free blocks in a disk recording area to sequential logical blocks in circular buffer based on the control information when a time delayed viewing mode is selected

  - o Assigning free blocks of the disk recording area and recording video streams of a channel to be recorded in the assigned physically discontinuous free blocks when a recording mode is selected during the time-delayed viewing mode, assigning free blocks nearest to recorded free blocks as the circular buffer blocks, and recording the video streams for time-delayed viewing in the assigned circular buffer

Barton discloses a system for time delayed viewing of program information further comprising:

  - o Using a processor to assign physically discontinuous free blocks in a disk recording area to sequential logical blocks in circular buffer based on the control information when a time delayed viewing mode is selected (Column 5 Lines 34-67 describes the assigning of free blocks in the circular buffer wherein the actual address of each segment and thereby corresponding the files being stored to the

physical blocks on the recording disk. Furthermore, it is noted in

Figures 5 and 6 the address is being assigned to the blocks of data

as the media switch 601 delays viewing)

- o Assigning free blocks of the disk recording area and recording

    video streams of a channel to be recorded in the assigned

    physically discontinuous free blocks when a recording mode is

    selected during the time-delayed viewing mode, assigning free

    blocks nearest to recorded free blocks as the circular buffer blocks,

    and recording the video streams for time-delayed viewing in the

    assigned circular buffer (Figure 10 shows the cache storing part of

    the system wherein free blocks are assigned based on the control

    mode as further seen in Figure 11 as further described in Column 9

    Lines 52+ through Column 1 Lines 1-31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of

the invention to use the video stream processing system, as disclosed by McIlvain et al

and further incorporate a system that assign physically discontinuous free blocks in a

disk recording area to sequential logical blocks in circular buffer based on the control

information when a time delayed viewing mode is selected, as disclosed by O'Connor et

al, in order to properly allow for the view to pause or rewind the video stream to allow for

more efficient viewing of the broadcast stream.

[claim 11]

In regard to Claim 11, McIlvain et al discloses a video stream processing method

wherein the free block nearest to the recorded free block are in a same track or nearest

track of the recorded free block (Column 5 Lines 20-52).

[claim 15]

In regard to Claim 15, McIlvain et al discloses a video stream processing method in a

broadcast receiving system for time-delayed viewing, which includes disks having

control information required for recording an input signal and reproducing recorded

information recorded and a drive for driving the disks, the video stream processing

method comprising:

- having physically discontinuous free blocks in a disk recording area to

  sequential logical blocks in circular buffer based on the control information

  when a time delayed viewing mode is selected (Figure 2 shows the

  assigning of free blocks to the circular buffer. The assigning is based on

  control information as described in Column 5 Lines 20-52. Furthermore,

  Column 3 Lines 51-55 the following: "A next logical position does not

  necessarily mean the next successive logical position or any other logical

  position. It is whatever logical position is to be accessed next, as

  determined by the type of command and other control". Thereby, the free

  block can be discontinuous as there is not a particular block that has be

  processed next and thereby the examiner reads this to allow for the

  controller to process the blocks in a discontinuous manner since it is not

  required for the next block to be processed); and

- recording video streams in the assigned circular buffer blocks (Column 5 Lines 20-35 describes the recording of video streams); however, fails to disclose

  o Using a processor to assign physically discontinuous free blocks in a disk recording area to sequential logical blocks in circular buffer based on the control information when a time delayed viewing mode is selected

  o Assigning free blocks of the disk recording area and recording video streams of a channel to be recorded in the assigned physically discontinuous free blocks when a recording mode is selected during the time-delayed viewing mode, assigning free blocks nearest to recorded free blocks as the circular buffer blocks, and recording the video streams for time-delayed viewing in the assigned circular buffer

Barton discloses a system for time delayed viewing of program information further comprising:

  o Using a processor to assign physically discontinuous free blocks in a disk recording area to sequential logical blocks in circular buffer based on the control information when a time delayed viewing mode is selected (Column 5 Lines 34-67 describes the assigning of free blocks in the circular buffer wherein the actual address of each segment and thereby corresponding the files being stored to the

physical blocks on the recording disk. Furthermore, it is noted in

Figures 5 and 6 the address is being assigned to the blocks of data

as the media switch 601 delays viewing)

- o Assigning free blocks of the disk recording area and recording

  video streams of a channel to be recorded in the assigned

  physically discontinuous free blocks when a recording mode is

  selected during the time-delayed viewing mode, assigning free

  blocks nearest to recorded free blocks as the circular buffer blocks,

  and recording the video streams for time-delayed viewing in the

  assigned circular buffer (Figure 10 shows the cache storing part of

  the system wherein free blocks are assigned based on the control

  mode as further seen in Figure 11 as further described in Column 9

  Lines 52+ through Column 1 Lines 1-31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of

the invention to use the video stream processing system, as disclosed by McIlvain et al

and further incorporate a system that assign physically discontinuous free blocks in a

disk recording area to sequential logical blocks in circular buffer based on the control

information when a time delayed viewing mode is selected, as disclosed by O'Connor et

al, in order to properly allow for the view to pause or rewind the video stream to allow for

more efficient viewing of the broadcast stream.

[claim 16]

In regard to Claim 16, McIlvain et al discloses a video stream processing method in a

broadcast receiving system for time-delayed viewing, which includes disks having

control information required for recording an input signal and reproducing recorded

information recorded and a drive for driving the disks, the video stream processing

method comprising:

- having physically discontinuous free blocks in a disk recording area to

  sequential logical blocks in circular buffer based on the control information

  when a time delayed viewing mode is selected (Figure 2 shows the

  assigning of free blocks to the circular buffer. The assigning is based on

  control information as described in Column 5 Lines 20-52. Furthermore,

  Column 3 Lines 51-55 the following: "A next logical position does not

  necessarily mean the next successive logical position or any other logical

  position. It is whatever logical position is to be accessed next, as

  determined by the type of command and other control". Thereby, the free

  block can be discontinuous as there is not a particular block that has be

  processed next and thereby the examiner reads this to allow for the

  controller to process the blocks in a discontinuous manner since it is not

  required for the next block to be processed); and

- reading video streams in the assigned circular buffer blocks (Column 5

  Lines 20-35 describes the recording of video streams); however, fails to

  disclose

- o Using a processor to assign physically discontinuous free blocks in

  a disk recording area to sequential logical blocks in circular buffer

  based on the control information when a time delayed viewing

  mode is selected

- o Assigning free blocks of the disk recording area and recording

  video streams of a channel to be recorded in the assigned

  physically discontinuous free blocks when a recording mode is

  selected during the time-delayed viewing mode, assigning free

  blocks nearest to recorded free blocks as the circular buffer blocks,

  and recording the video streams for time-delayed viewing in the

  assigned circular buffer

Barton discloses a system for time delayed viewing of program information further

comprising:

- o Using a processor to assign physically discontinuous free blocks in

  a disk recording area to sequential logical blocks in circular buffer

  based on the control information when a time delayed viewing

  mode is selected (Column 5 Lines 34-67 describes the assigning of

  free blocks in the circular buffer wherein the actual address of each

  segment and thereby corresponding the files being stored to the

  physical blocks on the recording disk. Furthermore, it is noted in

  Figures 5 and 6 the address is being assigned to the blocks of data

  as the media switch 601 delays viewing)

o Assigning free blocks of the disk recording area and recording

video streams of a channel to be recorded in the assigned

physically discontinuous free blocks when a recording mode is

selected during the time-delayed viewing mode, assigning free

blocks nearest to recorded free blocks as the circular buffer blocks,

and recording the video streams for time-delayed viewing in the

assigned circular buffer (Figure 10 shows the cache storing part of

the system wherein free blocks are assigned based on the control

mode as further seen in Figure 11 as further described in Column 9

Lines 52+ through Column 1 Lines 1-31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of

the invention to use the video stream processing system, as disclosed by McIlvain et al

and further incorporate a system that assign physically discontinuous free blocks in a

disk recording area to sequential logical blocks in circular buffer based on the control

information when a time delayed viewing mode is selected, as disclosed by O'Connor et

al, in order to properly allow for the view to pause or rewind the video stream to allow for

more efficient viewing of the broadcast stream.

[claim 17]

In regard to Claim 17, McIlvain et al discloses a video stream processing method in a

broadcast receiving system for time-delayed viewing, which includes disks having

control information required for recording an input signal and reproducing recorded

information recorded and a drive for driving the disks, the video stream processing

method comprising:

- having physically discontinuous free blocks in a disk recording area to

  sequential logical blocks in circular buffer based on the control information

  when a time delayed viewing mode is selected (Figure 2 shows the

  assigning of free blocks to the circular buffer. The assigning is based on

  control information as described in Column 5 Lines 20-52. Furthermore,

  Column 3 Lines 51-55 the following: "A next logical position does not

  necessarily mean the next successive logical position or any other logical

  position. It is whatever logical position is to be accessed next, as

  determined by the type of command and other control". Thereby, the free

  block can be discontinuous as there is not a particular block that has be

  processed next and thereby the examiner reads this to allow for the

  controller to process the blocks in a discontinuous manner since it is not

  required for the next block to be processed); and

- recording video streams in the assigned circular buffer blocks (Column 5

  Lines 20-35 describes the recording of video streams); however, fails to

  disclose

  - Using a processor to assign physically discontinuous free blocks in

    a disk recording area to sequential logical blocks in circular buffer

    based on the control information when a time delayed viewing

    mode is selected

- o Assigning free blocks of the disk recording area and recording video streams of a channel to be recorded in the assigned physically discontinuous free blocks when a recording mode is selected during the time-delayed viewing mode, assigning free blocks nearest to recorded free blocks as the circular buffer blocks, and recording the video streams for time-delayed viewing in the assigned circular buffer

Barton discloses a system for time delayed viewing of program information further comprising:

- o Using a processor to assign physically discontinuous free blocks in a disk recording area to sequential logical blocks in circular buffer based on the control information when a time delayed viewing mode is selected (Column 5 Lines 34-67 describes the assigning of free blocks in the circular buffer wherein the actual address of each segment and thereby corresponding the files being stored to the physical blocks on the recording disk. Furthermore, it is noted in Figures 5 and 6 the address is being assigned to the blocks of data as the media switch 601 delays viewing)

- o Assigning free blocks of the disk recording area and recording video streams of a channel to be recorded in the assigned physically discontinuous free blocks when a recording mode is selected during the time-delayed viewing mode, assigning free

blocks nearest to recorded free blocks as the circular buffer blocks, and recording the video streams for time-delayed viewing in the assigned circular buffer (Figure 10 shows the cache storing part of the system wherein free blocks are assigned based on the control mode as further seen in Figure 11 as further described in Column 9 Lines 52+ through Column 1 Lines 1-31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the video stream processing system, as disclosed by McIlvain et al and further incorporate a system that assign physically discontinuous free blocks in a disk recording area to sequential logical blocks in circular buffer based on the control information when a time delayed viewing mode is selected, as disclosed by O'Connor et al, in order to properly allow for the view to pause or rewind the video stream to allow for more efficient viewing of the broadcast stream.

[claim 18]

In regard to Claim 18, McIlvain et al discloses a recording medium in a broadcast receiving system having a hard disk drive, the recording medium comprising:

- A video stream storing area which records video streams (Column 5 Lines 20-25);

- wherein the video stream blocks are arranged physically discontinuously based on control information stored in the control area (Figure 2 shows the assigning of free blocks to the circular buffer. The assigning is based on control information as described in Column 5 Lines 20-52.

Furthermore, Column 3 Lines 51-55 the following: "A next logical position does not necessarily mean the next successive logical position or any other logical position. It is whatever logical position is to be accessed next, as determined by the type of command and other control". Thereby, the free block can be discontinuous as there is not a particular block that has be processed next and thereby the examiner reads this to allow for the controller to process the blocks in a discontinuous manner since it is not required for the next block to be processed); however, fails to disclose

- o video stream blocks which are physically discontinuously arranged and assigned sequentially within a circular buffer and which are used to record time delayed viewing

- o free blocks which are logically assignable to the circular buffer, or which record other video streams during a mode other than time delayed mode

- o control information area which stores control information relating to the video stream storing area

- o wherein the video stream blocks are arranged physically discontinuously based on control information stored in the control area

Barton discloses a system for time delayed viewing of program information further comprising:

- o video stream blocks which are physically discontinuously arranged

  and assigned sequentially within a circular buffer and which are

  used to record time delayed viewing (Column 5 Lines 34-67

  describes the assigning of free blocks in the circular buffer wherein

  the actual address of each segment and thereby corresponding the

  files being stored to the physical blocks on the recording disk.

  Furthermore, it is noted in Figures 5 and 6 the address is being

  assigned to the blocks of data as the media switch 601 delays

  viewing);

- o free blocks which are logically assignable to the circular buffer, or

  which record other video streams during a mode other than time

  delayed mode (Figure 10 shows the cache storing part of the

  system wherein free blocks are assigned based on the control

  mode as further seen in Figure 11);

- o control information area which stores control information relating to

  the video stream storing area (Figure 11 shows the control of the

  data storing area).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention to use the video stream processing system, as disclosed by McIlvain et al and

further incorporate a system that assign physically discontinuous free blocks in a disk

recording area to sequential logical blocks in circular buffer based on the control

information when a time delayed viewing mode is selected, as disclosed by O'Connor et

al, in order to properly allow for the view to pause or rewind the video stream to allow for more efficient viewing of the broadcast stream.

[claim 20]

In regard to Claim 20, Barton teaches a recording medium wherein the control information area comprises: file attribute information, file assignment information, free block information which manage the free blocks for each track of recording medium, and circular block information which manage circular buffer blocks (Column 8 Lines 8-65 describes the file information associate with each file transfer and the storing of the data on the buffer).

[claim 21]

In regard to Claim 21, McIlvain et al discloses a broadcast receiving system comprising:

- a hard disk drive having a hard disk recording medium, the recording medium having control information for recording an input signal and reproducing recorded information (Column 1 Lines 15-20 describes the recording medium being a hard disk drive for recording the input signal); and

- a controller having physically discontinuous free blocks in a disk recording area to sequential logical blocks in circular buffer based on the control information when a time delayed viewing mode is selected (Figure 2 shows the assigning of free blocks to the circular buffer. The assigning is based on control information as described in Column 5 Lines 20-52. Furthermore, Column 3 Lines 51-55 the following: "A next logical position

does not necessarily mean the next successive logical position or any

other logical position. It is whatever logical position is to be accessed

next, as determined by the type of command and other control". Thereby,

the free block can be discontinuous as there is not a particular block that

has be processed next and thereby the examiner reads this to allow for

the controller to process the blocks in a discontinuous manner since it is

not required for the next block to be processed); however, fails to disclose

- o a controller which assigns physically discontinuous free blocks in a

  disk recording area to sequential logical blocks in circular buffer

  based on the control information when a time delayed viewing

  mode is selected

Barton discloses a system for time delayed viewing of program information further

comprising:

- o a controller which assigns physically discontinuous free blocks in a

  disk recording area to sequential logical blocks in circular buffer

  based on the control information when a time delayed viewing

  mode is selected (Column 5 Lines 34-67 describes the assigning of

  free blocks in the circular buffer wherein the actual address of each

  segment and thereby corresponding the files being stored to the

  physical blocks on the recording disk. Furthermore, it is noted in

  Figures 5 and 6 the address is being assigned to the blocks of data

  as the media switch 601 delays viewing).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the video stream processing system, as disclosed by McIlvain et al and further incorporate a system that assign physically discontinuous free blocks in a disk recording area to sequential logical blocks in circular buffer based on the control information when a time delayed viewing mode is selected, as disclosed by O'Connor et al, in order to properly allow for the view to pause or rewind the video stream to allow for more efficient viewing of the broadcast stream.

[claim 32]

In regard to Claim 32, McIlvain et al discloses a broadcast receiving system comprising:

- hard disk drive having a hard disk as recording medium, the recording medium having control information for recording an input signal and reproducing recorded information (Column1 Lines 10-20)
  - having physically discontinuous free blocks in a disk recording area to sequential logical blocks in circular buffer based on the control information when a time delayed viewing mode is selected (Figure 2 shows the assigning of free blocks to the circular buffer. The assigning is based on control information as described in Column 5 Lines 20-52. Furthermore, Column 3 Lines 51-55 the following: "A next logical position does not necessarily mean the next successive logical position or any other logical position. It is whatever logical position is to be accessed next, as determined by the type of command and other control". Thereby, the free block can be discontinuous as there is not a particular block that has be

processed next and thereby the examiner reads this to allow for the

controller to process the blocks in a discontinuous manner since it is not

required for the next block to be processed); however, fails to disclose

- controller which records a video stream in physical free blocks in a

  disk recording area to sequential logical blocks in circular buffer

  based on the control information when a time delayed viewing

  mode is selected

Barton discloses a system for time delayed viewing of program information further

comprising:

- controller which records a video stream in physical free blocks in a

  disk recording area to sequential logical blocks in circular buffer

  based on the control information when a time delayed viewing

  mode is selected (Column 5 Lines 34-67 describes the assigning of

  free blocks in the circular buffer wherein the actual address of each

  segment and thereby corresponding the files being stored to the

  physical blocks on the recording disk. Furthermore, it is noted in

  Figures 5 and 6 the address is being assigned to the blocks of data

  as the media switch 601 delays viewing).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of

the invention to use the video stream processing system, as disclosed by McIlvain et al

and further incorporate a system that assign physically discontinuous free blocks in a

disk recording area to sequential logical blocks in circular buffer based on the control

information when a time delayed viewing mode is selected, as disclosed by O'Connor et

al, in order to properly allow for the view to pause or rewind the video stream to allow for

more efficient viewing of the broadcast stream.

7.   Claims 12-14, 23-26,28-31 are rejected under 35 U.S.C. 103(a) as being

unpatentable McIlvain et al (US 5,765,200) in view of Barton et al (US 6,233,389) in

further view of Aoki et al (US 6,009,231) .

[claim 12]

In regard to Claim 12, McIlvain et al discloses a video stream processing method in a

broadcast receiving system for time-delayed viewing, which includes disks having

control information required for recording an input signal and reproducing recorded

information recorded and a drive for driving the disks, the video stream processing

method comprising:

- having physically discontinuous free blocks in a disk recording area to

    sequential logical blocks in circular buffer based on the control information

    when a time delayed viewing mode is selected (Figure 2 shows the

    assigning of free blocks to the circular buffer. The assigning is based on

    control information as described in Column 5 Lines 20-52. Furthermore,

    Column 3 Lines 51-55 the following: "A next logical position does not

    necessarily mean the next successive logical position or any other logical

position. It is whatever logical position is to be accessed next, as determined by the type of command and other control". Thereby, the free block can be discontinuous as there is not a particular block that has be processed next and thereby the examiner reads this to allow for the controller to process the blocks in a discontinuous manner since it is not required for the next block to be processed); and

- recording video streams in the assigned circular buffer blocks (Column 5 Lines 20-35 describes the recording of video streams); however, fails to disclose

    o Using a processor to assign physically discontinuous free blocks in a disk recording area to sequential logical blocks in circular buffer based on the control information when a time delayed viewing mode is selected

    o Assigning free blocks of the disk recording area and recording video streams of a channel to be recorded in the assigned physically discontinuous free blocks when a recording mode is selected during the time-delayed viewing mode, assigning free blocks nearest to recorded free blocks as the circular buffer blocks, and recording the video streams for time-delayed viewing in the assigned circular buffer

    o Reading free blocks to be reproduced based on control information, assigning free blocks nearest to the reproduced free blocks as the

circular buffer blocks and recording the video stream for time-

deleted viewing in the assigned circular buffer blocks when a

reproduction mode is selected together with the time delayed

viewing mode.

Barton discloses a system for time delayed viewing of program information further

comprising:

- o Using a processor to assign physically discontinuous free blocks in

  a disk recording area to sequential logical blocks in circular buffer

  based on the control information when a time delayed viewing

  mode is selected (Column 5 Lines 34-67 describes the assigning of

  free blocks in the circular buffer wherein the actual address of each

  segment and thereby corresponding the files being stored to the

  physical blocks on the recording disk. Furthermore, it is noted in

  Figures 5 and 6 the address is being assigned to the blocks of data

  as the media switch 601 delays viewing)

- o Assigning free blocks of the disk recording area and recording

  video streams of a channel to be recorded in the assigned

  physically discontinuous free blocks when a recording mode is

  selected during the time-delayed viewing mode, assigning free

  blocks nearest to recorded free blocks as the circular buffer blocks,

  and recording the video streams for time-delayed viewing in the

  assigned circular buffer (Figure 10 shows the cache storing part of

the system wherein free blocks are assigned based on the control

mode as further seen in Figure 11 as further described in Column 9

Lines 52+ through Column 1 Lines 1-31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of

the invention to use the video stream processing system, as disclosed by McIlvain et al

and further incorporate a system that assign physically discontinuous free blocks in a

disk recording area to sequential logical blocks in circular buffer based on the control

information when a time delayed viewing mode is selected, as disclosed by O'Connor et

al, in order to properly allow for the view to pause or rewind the video stream to allow for

more efficient viewing of the broadcast stream.

Aoki teaches a system for storing items on a circular buffer further comprising:

- o Reading free blocks to be reproduced based on control information,

  assigning free blocks nearest to the reproduced free blocks as the

  circular buffer blocks and recording the video stream for time-

  deleted viewing in the assigned circular buffer blocks when a

  reproduction mode is selected together with the time delayed

  viewing mode (Figure 4a-4c shows the storing of the data on the

  circular buffer wherein it is further described in Column 7 Lines 59+

  through Column 8 Lines 1-34 describes the selection and storing of

  the video streams wherein the next free block is present).

It is taught by Aoki to provide simultaneous viewing in order to allow for system that

allows the user not to miss programs while viewing or recording a broadcast stream.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention to use broadcast receiving system that assigned discontinuous blocks, as

disclosed by McIlvain in view of Barton, and further incorporate a system that allows for

simultaneous time delay viewing and recording function, as taught by Aoki, in order to

allow for the user to have an expandable system that allows for various viewing and

recording options.

[claim 13]

In regard to Claim 13, McIlvain et al discloses a video stream processing method

wherein the free block nearest to the recorded free block are in a same track or nearest

track of the recorded free block (Column 5 Lines 20-52).

[claim 14]

In regard to Claim 14, McIlvain et al discloses a video stream processing method in a

broadcast receiving system for time-delayed viewing, which includes disks having

control information required for recording an input signal and reproducing recorded

information recorded and a drive for driving the disks, the video stream processing

method comprising:

- having physically discontinuous free blocks in a disk recording area to

  sequential logical blocks in circular buffer based on the control information

  when a time delayed viewing mode is selected (Figure 2 shows the

  assigning of free blocks to the circular buffer. The assigning is based on

  control information as described in Column 5 Lines 20-52. Furthermore,

  Column 3 Lines 51-55 the following: "A next logical position does not

necessarily mean the next successive logical position or any other logical position. It is whatever logical position is to be accessed next, as determined by the type of command and other control". Thereby, the free block can be discontinuous as there is not a particular block that has be processed next and thereby the examiner reads this to allow for the controller to process the blocks in a discontinuous manner since it is not required for the next block to be processed); and

- recording video streams in the assigned circular buffer blocks (Column 5 Lines 20-35 describes the recording of video streams); however, fails to disclose

  o Using a processor to assign physically discontinuous free blocks in a disk recording area to sequential logical blocks in circular buffer based on the control information when a time delayed viewing mode is selected

  o Assigning free blocks of the disk recording area and recording video streams of a channel to be recorded in the assigned physically discontinuous free blocks when a recording mode is selected during the time-delayed viewing mode, assigning free blocks nearest to recorded free blocks as the circular buffer blocks, and recording the video streams for time-delayed viewing in the assigned circular buffer

- o Reading free blocks to be reproduced based on control information, assigning free blocks nearest to the reproduced free blocks as the circular buffer blocks and recording the video stream for time-deleted viewing in the assigned circular buffer blocks when a reproduction mode is selected together with the time delayed viewing mode.

Barton discloses a system for time delayed viewing of program information further comprising:

- o Using a processor to assign physically discontinuous free blocks in a disk recording area to sequential logical blocks in circular buffer based on the control information when a time delayed viewing mode is selected (Column 5 Lines 34-67 describes the assigning of free blocks in the circular buffer wherein the actual address of each segment and thereby corresponding the files being stored to the physical blocks on the recording disk. Furthermore, it is noted in Figures 5 and 6 the address is being assigned to the blocks of data as the media switch 601 delays viewing)

- o Assigning free blocks of the disk recording area and recording video streams of a channel to be recorded in the assigned physically discontinuous free blocks when a recording mode is selected during the time-delayed viewing mode, assigning free blocks nearest to recorded free blocks as the circular buffer blocks,

and recording the video streams for time-delayed viewing in the

assigned circular buffer (Figure 10 shows the cache storing part of

the system wherein free blocks are assigned based on the control

mode as further seen in Figure 11 as further described in Column 9

Lines 52+ through Column 1 Lines 1-31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of

the invention to use the video stream processing system, as disclosed by McIlvain et al

and further incorporate a system that assign physically discontinuous free blocks in a

disk recording area to sequential logical blocks in circular buffer based on the control

information when a time delayed viewing mode is selected, as disclosed by O'Connor et

al, in order to properly allow for the view to pause or rewind the video stream to allow for

more efficient viewing of the broadcast stream.

Aoki teaches a system for storing items on a circular buffer further comprising:

- o Reading free blocks to be reproduced based on control information,

  assigning free blocks nearest to the reproduced free blocks as the

  circular buffer blocks and recording the video stream for time-

  deleted viewing in the assigned circular buffer blocks when a

  reproduction mode is selected together with the time delayed

  viewing mode (Figure 4a-4c shows the storing of the data on the

  circular buffer wherein it is further described in Column 7 Lines 59+

  through Column 8 Lines 1-34 describes the selection and storing of

  the video streams wherein the next free block is present).

It is taught by Aoki to provide simultaneous viewing in order to allow for system that

allows the user not to miss programs while viewing or recording a broadcast stream.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention to use broadcast receiving system that assigned discontinuous blocks, as

disclosed by McIlvain in view of Barton, and further incorporate a system that allows for

simultaneous time delay viewing and recording function, as taught by Aoki, in order to

allow for the user to have an expandable system that allows for various viewing and

recording options.

[claim 23]

In regard to Claim 23, McIlvain et al discloses a broadcast receiving system (Figure 2);

however, fails to disclose:

- o an input device which enables simultaneous operation of the time-
  delayed viewing mode and a recording mode

- o wherein the controller assigns free blocks of the recording medium,
  records the video streams of a channel to be recorded in the
  assigned free blocks in response to the selection of the
  simultaneous operation of the time-delayed and recording modes,
  assigns free blocks nearest to the recorded free blocks as circular
  buffer blocks, and records the video streams for time-delayed
  viewing in the assigned circular buffer blocks

Aoki et al discloses a system for simultaneous viewing further comprising:

        o   an input device which enables simultaneous operation of the time-
delayed viewing mode and a recording mode (Figure 1 shows input
device wherein time delayed viewing and recording is available);

        o   wherein the controller assigns free blocks of the recording medium,
records the video streams of a channel to be recorded in the
assigned free blocks in response to the selection of the
simultaneous operation of the time-delayed and recording modes,
assigns free blocks nearest to the recorded free blocks as circular
buffer blocks, and records the video streams for time-delayed
viewing in the assigned circular buffer blocks (Figure 4a-4c shows
the storing of the data on the circular buffer wherein it is further
described in Column 7 Lines 59+ through Column 8 Lines 1-34
describes the selection and storing of the video streams).

It is taught by Aoki to provide simultaneous viewing in order to allow for system that
allows the user not to miss programs while viewing or recording a broadcast stream.
Therefore, it would have been obvious to one of ordinary skill in the art at the time of the
invention to use broadcast receiving system that assigned discontinuous blocks, as
disclosed by McIlvain in view of Barton, and further incorporate a system that allows for
simultaneous time delay viewing and recording function, as taught by Aoki, in order to
allow for the user to have an expandable system that allows for various viewing and
recording options.

[claim 24]

In regard to Claim 24, McIlvain et al discloses a broadcast receiving system (Figure 2);

however, fails to disclose:

- an input device which enables simultaneous operation of the time-delayed viewing mode and a recording mode

- wherein the controller assigns free blocks of the recording medium, records the video streams of a channel to be recorded in the assigned free blocks in response to the selection of the simultaneous operation of the time-delayed and recording modes, assigns free blocks nearest to the recorded free blocks as circular buffer blocks, and records the video streams for time-delayed viewing in the assigned circular buffer blocks

Aoki et al discloses a system for simultaneous viewing further comprising:

- an input device which enables simultaneous operation of the time-delayed viewing mode and a recording mode (Figure 1 shows input device wherein time delayed viewing and recording is available);

- wherein the controller assigns free blocks of the recording medium, records the video streams of a channel to be recorded in the assigned free blocks in response to the selection of the simultaneous operation of the time-delayed and recording modes, assigns free blocks nearest to the recorded free blocks as circular

buffer blocks, and records the video streams for time-delayed

viewing in the assigned circular buffer blocks (Figure 4a-4c shows

the storing of the data on the circular buffer wherein it is further

described in Column 7 Lines 59+ through Column 8 Lines 1-34

describes the selection and storing of the video streams).

It is taught by Aoki to provide simultaneous viewing in order to allow for system that

allows the user not to miss programs while viewing or recording a broadcast stream.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention to use broadcast receiving system that assigned discontinuous blocks, as

disclosed by McIlvain in view of Barton, and further incorporate a system that allows for

simultaneous time delay viewing and recording function, as taught by Aoki, in order to

allow for the user to have an expandable system that allows for various viewing and

recording options.

[claim 25]

In regard to Claim 25, Aoki et al further teaches a broadcast receiving system, wherein

the controller updates the control information and sets a pointer of a write point to a last

one of the assigned circular buffer blocks after recording the video streams (Figures

12a-12c shows the control information that points to write point of last block).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention to use the broadcast system, as disclosed by McIlvain in view of Barton, and

further incorporate the setting of read and write pointers, as taught by Aoki et al, in order

to allow for the user to have an expandable system that allows for various viewing and

recording options.

[claim 26]

In regard to Claim 26, Aoki et al teach a broadcast receiving system of claim 21,

wherein the hard disk drive comprises: a control unit which controls the hard disk drive;

and an expander which expands the hard disk drive (Figure 1 shows the hard drive

wherein it is well known a controller and expander exists for control of the hard drive).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention to use the broadcast system, as disclosed by McIlvain in view of Barton, and

further incorporate the setting of read and write pointers, as taught by Aoki et al, in order

to allow for the user to have an expandable system that allows for various viewing and

recording options.

[claim 28]

In regard to Claim 28, McIlvain et al discloses a broadcast receiving system (Figure 2);

however, fails to disclose:

> o   an input device which enables simultaneous operation of the time-
>
>   delayed viewing mode and a recording mode
>
> o   wherein the controller assigns free blocks of the recording medium,
>
>   records the video streams of a channel to be recorded in the
>
>   assigned free blocks in response to the selection of the
>
>   simultaneous operation of the time-delayed and recording modes,
>
>   assigns free blocks nearest to the recorded free blocks as circular

buffer blocks, and records the video streams for time-delayed

viewing in the assigned circular buffer blocks

Aoki et al discloses a system for simultaneous viewing further comprising:

- o an input device which enables simultaneous operation of the time-

    delayed viewing mode and a recording mode (Figure 1 shows input

    device wherein time delayed viewing and recording is available);

- o wherein the controller assigns free blocks of the recording medium,

    records the video streams of a channel to be recorded in the

    assigned free blocks in response to the selection of the

    simultaneous operation of the time-delayed and recording modes,

    assigns free blocks nearest to the recorded free blocks as circular

    buffer blocks, and records the video streams for time-delayed

    viewing in the assigned circular buffer blocks (Figure 4a-4c shows

    the storing of the data on the circular buffer wherein it is further

    described in Column 7 Lines 59+ through Column 8 Lines 1-34

    describes the selection and storing of the video streams).

It is taught by Aoki to provide simultaneous viewing in order to allow for system that

allows the user not to miss programs while viewing or recording a broadcast stream.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention to use broadcast receiving system that assigned discontinuous blocks, as

disclosed by McIlvain in view of Barton, and further incorporate a system that allows for

simultaneous time delay viewing and recording function, as taught by Aoki, in order to

allow for the user to have an expandable system that allows for various viewing and

recording options.

[claim 29]

In regard to Claim 29, Aoki et al discloses a broadcast receiving system of claim 28,

wherein the circular buffer blocks form a circular buffer write and read pointers of the

circular buffer have special pointer values in the random access memory so that the

circular buffer blocks of the circular buffer are discontinuous (Figures 12a-12c shows

the control information that points to write point of last block as further described in

Column 11 Lines 5-60). Therefore, it would be obvious to one of ordinary skill in the art

at the time of the invention to use broadcast receiving system that assigned

discontinuous blocks, as disclosed by McIlvain in view of Barton, and further incorporate

a system that provides buffer write and read pointers, as taught by Aoki, in order to

allow for the user to have an expandable system that allows for various viewing and

recording options.

[claim 30]

In regard to Claim 30, Aoki et al discloses a broadcast receiving system of claim 28,

wherein the circular buffer blocks form a circular buffer write and read pointers of the

circular buffer have special pointer values in the random access memory so that the

circular buffer blocks of the circular buffer are discontinuous (Figures 12a-12c shows

the control information that points to write point of last block as further described in

Column 11 Lines 5-60). Therefore, it would be obvious to one of ordinary skill in the art

at the time of the invention to use broadcast receiving system that assigned

discontinuous blocks, as disclosed by McIlvain in view of Barton, and further incorporate

a system that provides buffer write and read pointers, as taught by Aoki, in order to

allow for the user to have an expandable system that allows for various viewing and

recording options.

[claim 31]

In regard to Claim 31, Aoki et al discloses a broadcast receiving system of claim 28,

wherein the circular buffer blocks form a circular buffer write and read pointers of the

circular buffer have special pointer values in the random access memory so that the

circular buffer blocks of the circular buffer are discontinuous (Figures 12a-12c shows

the control information that points to write point of last block as further described in

Column 11 Lines 5-60). Therefore, it would be obvious to one of ordinary skill in the art

at the time of the invention to use broadcast receiving system that assigned

discontinuous blocks, as disclosed by McIlvain in view of Barton, and further incorporate

a system that provides buffer write and read pointers, as taught by Aoki, in order to

allow for the user to have an expandable system that allows for various viewing and

recording options.

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8.   Claims 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over

McIlvain et al (US 5,765,200) in view of) in further view of Aoki et al (US 6,009,231).

[claim 7]

In regard to Claim 7, McIlvain et al in view of Barton et al discloses a video stream

processing method of claim 1, wherein the sequentially assigning free blocks comprises

interleaved assigning the free blocks for each video stream (Figure 2 shows the

assigning of free blocks to the circular buffer. The assigning is based on control

information as described in Column 5 Lines 20-52); however fails to discloses that if the

video streams are of different channels to be recorded concurrently. Aoki discloses a

system wherein reproduction of information is done through the use of a ring buffer. As

further shown in Figure 1 various streams are broadcasted and entered into the system

as further described in Column 1 Lines 12-41. The various transmitting of the broadcast

channels allows the system to process various signals into the system for storing onto

the ring buffer. Therefore, it would have been obvious to one of ordinary skill in the art

at the time of the invention to use a video stream processing method, as disclosed by

McIlvain et al, and further incorporate a system wherein the video streams are different

broadcast channels being entered into the system, as disclosed by Aoki et al.

[claim 10]

In regard to Claim 10, McIlvain et al discloses a video stream processing method of

claim 7, further comprising updating the control information and setting a pointer of a

write point to a last one of the assigned circular buffer block each time the video

streams are recorded in the free blocks subsequent to the recording of the video

streams for time-delayed viewing in the assigned circular buffer blocks (Column 5 Lines

43-67 and Column 6 Lines 24-32 describes the setting the write pointer to the last

assigned circular buffer block)..

9.   Claims 22 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable by

McIlvain et al (US 5,765,200) in view of Barton et al (US 6,233,389) in further view of

Peters et al (US 5,884,284).

[claim 22]

In regard to Claim 22, McIlvain in view of Barton discloses a broadcast receiving system

however, fails to disclose the following limitations:

- a first radio frequency tuner which receives an external broadcast signal, a

  second radio frequency tuner which receives an external analog broadcast

  signal,

- a video compressor which converts the received analog signal to a digital

  signal and compresses the digital signal, and

- a selector which selectively enables transmission of the external digital

  broadcast signal and the compressed digital signal.

Peters et al discloses a telecommunication system wherein tuners are present for

receiving broadcast information as seen in Figure 1 and further described in Column 10

Lines 52-63. The video converts and compresses the digital signal wherein the random

access memory will temporarily store the information as further described in Figure 1.

The system comprising of frequency tuners allows for more information both digital and

analog to be transmitted into the system and furthermore allows for proper conversion

and selection of the data stream. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of the invention to use a broadcast receiving system,

as disclosed by Aoki et al, and further incorporate tuners and video compressor and

selector to the system, as disclosed by Peters et al, to allow for more information to be

transmitted and entered into the system.

[claim 27]

In regard to Claim 27, Barton discloses a broadcast receiving system of claim 22,

wherein the controller comprises: a read-only memory which stores control program

data to control the random access memory and the hard disk drive and a second

random access memory which temporarily stores data during a control operation of the

controller (Figure 1 shows the various memories that are used for permanent and

temporary storage).

Conclusion

10.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to JAMIE JO VENT ATALA whose telephone number is

(571)272-7384. The examiner can normally be reached on 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

/JAMIE JO VENT ATALA/

Examiner, Art Unit 2621